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September 10, 1997

Daniel B. Phythyon, Esq.
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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Re: LMCC 470-512 MHz Frequency Coordination Consensus

Dear Mr. Phythyon:

In the *Second Report and Order* of the Commission's "refarming" proceeding (PR Docket 92-235), the Commission directed its certified frequency advisory committees to reach a consensus on the technical coordination procedures for the processing of applications. Of immediate importance are procedures to effect 470-512 MHz frequency coordination. The LMCC is pleased to report to you that a consensus has been reached that protects the integrity of the frequency coordination process; provides for the equitable, efficient and timely processing of applications; and includes procedures for the selection and certification of frequencies.

The interference criteria and propagation/coverage protocols embodied within the TIA Working Group WG 8.8 document, which was submitted to the FCC by TIA, provide the technical foundations by which frequencies may be reviewed and identified for certification by the frequency advisory committees. Through engineering justifications based upon service area reliabilities for predetermined levels of desired audio quality, the consensus plan assures that frequency selection procedures limit interference to incumbent and proposed system service areas, thereby insuring that only viable system proposals are certified. The frequency advisory committees will recommend, where necessary and to the extent possible, system modifications to maximize efficient use of the spectrum.

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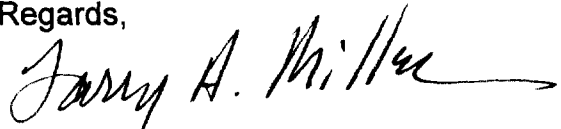
D. B. Phythyon, Esq.
September 10, 1997
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In accordance with the Commission's directive, the frequency advisory committees have previously communicated to the Bureau procedures for the effective electronic transfer of coordination certification data. In accordance with the Congressional directives of Section 309(j)(6)(E) of the Telecommunications Act, the frequency advisory committees have agreed upon, and are committed to using, all practicable engineering solutions and administrative processes necessary to resolve competing applications.

The LMCC has enclosed a summary of the actual frequency selection protocols that will be used at 470-512 MHz in conformance with the TIA Working Group WG 8.8 document.

We hope you find the enclosed materials helpful and will remain available for any other assistance the Commission may desire in these endeavors.

Regards,



Larry A. Miller
President



LAM:bjl

Enclosure: Frequency Selection Procedures 12.5 kHz Offset Assignments
at 470-512 MHz

cc: David Horowitz
Herb Zeiler
Ira Keltz

**FREQUENCY SELECTION PROCEDURES
12.5 kHz OFFSET ASSIGNMENTS AT 470-512 MHz**

Introduction

It is observed that the current rules allow a minimum 40-mile separation between co-channel base stations and that these stations may radiate up to 1000 watts with antenna heights up to 500 feet. Although mobile radio deployments of up to a 30-mile radius from the base station are allowed, it is further observed that with the minimum spacing and for equal powers and antenna heights, excessive interference will occur to mobiles located in an area directly between two 40-mile spaced stations (e.g. the C/I ratio would be 0 dB at the half-way point).

Under these conditions, the effective usable range for each of the systems, on a direct line between them, is about 13.5 miles (pursuant to Table 5, Appendix A, of the TIA Working Group WG 8.8 document). Thus, for each system, it can be calculated that approximately 5% of a 20-mile radius coverage area is rendered unusable.

To be consistent, it would, therefore, be permissible to allow a similar level of inter-system protection when considering the relationship between a 12.5 kHz system and an existing 25 kHz system, separated by 12.5 kHz. It is further observed that the degree of Adjacent Channel Coupled Power (ACCP) between these two systems will be about 30 dB less than that of co-channel conditions, thereby allowing a closer spacing than 40 miles, with 20 miles being probable for full power/height (1000W/500ft) and possibly even less for reduced power/heights.

Therefore, frequency advisory committees shall insure that applications for use of 12.5 kHz offsets adhere to this same set of principals at this time. To attempt to balance the rights of both incumbents and applicants, the following process shall be implemented:

Definition of Service Area

For both an incumbent or an applicant, an associated service area shall be generally defined as the smaller of the area contained within: (a) a 39 dB μ base station transmitter contour; (b) a 20-mile radius; or (c) a specified geographical polygon associated with the incumbent's/applicant's actual planned area of use. This will be determined by:

1. Extending 72 or greater equally spaced radials from the base transmitter to 20 miles distance;

2. Determining the 39 dB μ distance for each radial, using the associated ERP and HAAT, as calculated between 2-10 miles;
3. Comparing the 39 dB μ distance, 20 miles and the intersection on that radial of a service area polygon (if specified/available);
4. Selecting the smallest distance, repeating for each radial; and
5. Creating a service area boundary by connecting at least the 72 distance points.

Interference Criteria

The degree of interference from the applicant to each incumbent's service area, as defined above, shall be calculated using the methods defined by the TIA Working Group WG 8.8 document, as well as the degree of interference from multiple incumbents to the applicant's service area. If an incumbent or the applicant has unacceptable interference of more than 5% reduction of the calculated service area reliability (e.g. 95% reduced to 90%; 87% reduced to 82%; etc.), then the application shall not be certified on that (offset) frequency. In all instances, however, new applicants or incumbents who have secured letters of concurrence from all affected incumbent system operators may have their respective applications certified.

The interference calculation shall assume DAQ = 3.0 and ACCP = -30dBc (the exact value should be used, if known, but coordinators must be prepared to provide this information, if requested, as a part of subsequent coordination processes).

Co-channel frequency coordinations on the existing main 25 kHz channels shall, at this time, continue to adhere to the 40-mile base station spacing rule. However, co-channel coordinations on the new 12.5 kHz offset frequencies shall utilize the same service area interference reduction process and criteria as above, except with ACCP = 0 dBc.

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